March 12, 1952

Dear Dr. Kauffmann:

After a good many years, our experiments on Salmonella genetics have finally produced some conclusions which may be of interest to you. We have submitted an account of this work for publication, but as it will be many mohhhs before the paper will be in print, I am enclosing an abstract in the form of a progress report. May I direct your attention especially to the occurrence of serotypic "hybrids" of S. typhi X S. typhimurium, IX, XII; i;--. As far as I could learn, this type has not yet been reported.

I appreciate the courtesies that you have shown me in the past, and hope that additional requests will not impose and undue burden. We are especially interesting in continuing studies on the genetics of the flagella (in E. coli as well as Salmonella). Stable, non-motile O-variants of normally motile OH Salmonella types are especially advantageous for these studies. In the absence of any systematic method of securing O-variants, however, our material has been very limited. With one O-variant of S. typhimurium (secured from P. R. Edwards) we have convinced ourselves that motility can be genetically tranferred or "transduced" from an OH to an O strain. It is almost essential, however, that we secure a wider range of material, both in recurrences of O-typhimurium, and especially in O-variants of other Salmonella types whose typical flagellar type is distinct from that of S. typhimurium. Owing to the adsorption specificities of the genetic agent, we are limited to cultures carrying the XII_2 factor. I should be indebted to you if you can provide such cultures, or can suggest other possible sources or means of obtaining them. We would be interested, if I may recapitulate, in relatively stable O-variants from normally OH cultures either of S. typhimurium, or other serotypes of groups B or D that include the XII_2 somatic antigen. The "natural O-forms": S. gallinarum-pullorum have not responded to our techniques.

May I enquire about a second point that you may reached your attention or that of your colleagues? Some years ago, Sertic and later Rakieten described phages apparently specific for the flagella of S. typhi. Rakieten's material has since been lost. Do you know of anyone who may possibly have preserved an interest in, or samples of, these phages?

Your new book "Enterobacteriaceae" has just come in. I can only comment that it is invaluable.

Yours sincerely,

Joshua Lederberg
Associate Professor of Genetics